CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-012

RESCISSION OF WASTE DISCHARGE REQUIREMENTS FOR:

BECTON, DICKINSON & CO

for the property located at

14300 WINCHESTER BOULEVARD
LOS GATOS
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

SITE DESCRIPTION

1. Becton, Dickinson & Co. (hereinafter called the discharger) owns and operates a facility that manufactures medical gloves at 14300 Winchester Boulevard in the City of Los Gatos in Santa Clara County. Manufacturing processes include electroforming and electroplating molds that are used to shape the gloves. The facility was built in 1962 on land previously used for agricultural purposes.

2. The site occupies 14 acres of an industrial park in a mixed commercial, industrial, and residential area. Los Gatos Creek is 20 yards to the south of the site. Except for 2 acres of land adjacent to Los Gatos Creek, the entire site is paved or covered by buildings. The site includes an office building, a process building, a plating shop, a machine shop, a research and development laboratory, a water treatment plant, an indoor hazardous-waste storage area, two raw-material storage areas, and 10 monitoring wells (Figure 1).

3. Hazardous wastes generated on the site in the manufacturing processes have included plasticizers, spent Stoddard solvent, and painting sludge. Wastewater generated from the manufacturing processes is treated in an onsite wastewater treatment plant. Treated wastewater is discharged to the sanitary sewer under a permit issued by the San Jose/Santa Clara Water Pollution Control Plant. The discharger has discontinued the use of Stoddard solvent and now uses a solvent provided by Safety Kleen, a permitted waste hauler. Safety Kleen removes any solvent waste from the site. Sludge is placed in 55-gallon drums and removed from the site by a permitted waste hauler.

SITE HYDROGEOLOGY

4. The site geology consists of alluvium composed of semi-indurated and poorly sorted deposits of gravelly sand, sandy silts and clays. Shallow deposits from the ground surface to about 20 feet bgs consist primarily of gavels and smaller amount of sand and silt. The deeper deposits down to 120 feet bgs are composed of sandy silts and sandy clays with weathered sands and gavels. The water table is about 30 feet bgs and the groundwater gradient flows approximately north at 0.005 ft/ft.

SITE INVESTIGATIONS

5. In 1982, the discharger notified the Board of its intent to remove the underground storage tank (UST) used to store Stoddard solvent. Board staff required the discharger to install one monitoring well downgradient of the UST. Chemical analyses from the monitoring well showed 91,000 ppb of Stoddard solvent in the soil and 5,000 ppb of Stoddard solvent in the groundwater. Three additional wells were installed and groundwater was found to contain up to 8,800 ppb phthalate, 6,000 ppb Stoddard solvent, and 14,000 ppb total hydrocarbons. 11 total wells have been installed to characterize the site.

6. On December 17, 1986, the Board adopted Order No. 86-100 (Waste Discharge Requirements) requiring the discharger to perform monitoring for five years to determine pollutant behavior in the groundwater at the site. The Order also specified reports to be submitted that: evaluated the hydrogeological characteristics of the site, evaluated the effectiveness of the interim monitoring program, evaluates final remedial measures, and recommends final remedial actions. These reports were submitted in a timely manner.

7. The five year quarterly groundwater and surface water monitoring program began in 1987. The program included collection and chemical analyses of groundwater samples from selected monitoring wells at the site, and from Los Gatos Creek. Water samples were analyzed for phthalate esters, Stoddard solvent, and BTEX.

8. Analysis of the groundwater data show two general trends:

   i. Concentrations of chemicals in groundwater decrease significantly with the distance of the wells sampled from the former location of the UST, and

   ii. Concentrations of chemicals in groundwater have decreased significantly over time.

Table 1

→→→→→→ distance from former storage tank increases

	MW-10	MW-2	MW-3	MW-4	MW-9	MW-8	MW-6	MW-11	MW-5	MW-7
1986	2 bis 4 bb	NA	63 bis	10 bis	6 bis	3 bis	5 bis	NA	3 bis	4 bis
1987	59 dnb 4 bb 19 bis	NA	ND	ND	ND	ND	ND	NA	ND	ND
1988	ND	950 bis	ND	ND	ND	ND	ND	NA	ND	24 bis
1989	ND	510 bis 21 dno	ND	ND	ND	ND	ND	NA	ND	ND

1990	9 bis	654 bis	ND	ND	ND	ND	ND	NA	5 bis	ND
1991	ND	285 bis	ND	ND	10 dbn	ND	ND	NA	ND	ND
1992	NA	NA	NA	NA	NA	NA	NA	2 dnb	NA	NA
1993	NA	ND	NA	NA	ND	ND	ND	ND	ND	ND
1994	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA

LEGEND:

Note: all units are in ppb, all BTE analyses were below detection limits of 0.5 ppb

NA = Not Analyzed
ND = Below Detection Limit of 2 ppb
bis = Di (2-ethylhexyl) Phthalate
bb = Butyl Benzyl Phthalate
dnb = Di-n-butyl Phthalate
dno = Di-n-octyl Phthalate

9. The Maximum Contaminant Level (MCL) for Benzene is 1 ppb and for Di (2-ethylhexyl) Phthalate is 4 ppb. No drinking water action levels for other phthalates or Stoddard solvent have been established yet. The EPA National Advisory Water Quality Criteria for drinking water establishes a range of 15,000 to 350,000 ppb for four of the phthalates and an EPA Region IX health advisory recommends 38.5 ppb and 3,750 ppb for two of the phthalates.

INTERIM REMEDIAL ACTION

10. The discharger determined that the UST was the source of the release and discontinued its use in 1983. The UST was removed in 1985 along with 300 cubic yards of contaminated soil from a depth to 23 feet bgs. Monitoring well MW-1 was abandoned because of its proximity to the excavation. Soil remediation is complete and no further work is to be done.

11. The discharger has taken other steps to prevent future releases from the site. USTs are no longer used for storage. Above ground storage areas have been paved and bermed to contain accidental discharges. The waste storage area was moved to inside the process building

RECOMMENDATION FOR FINAL ACTION

12. The discharger submitted a report, dated September 29, 1992, recommending final action for the site. The report concludes that chemical concentrations in the monitoring wells have decreased over the five-year monitoring program due to the following factors:

    i. the removal of chemically affected soils from the source area,

    ii. natural biodegradation of chemicals, and

    iii. adsorption of chemicals onto the soil.

The report also concluded that the risks to beneficial uses were insignificant and recommended that the case be closed. No additional investigations would be conducted. Monitoring efforts would cease and all the monitoring wells would be sealed.

13. The discharger has agreed to submit a workplan for sealing the wells and a final report documenting that all the monitoring wells used at the site have been closed.

STATE BOARD RESOLUTIONS

14. State Board Resolution 68-16
On October 28, 1968, the State Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining high Quality Waters in California". This policy calls for maintaining the existing high quality of State waters unless it is demonstrated that any change would be consistent with the maximum public benefit and not unreasonably affected beneficial uses. This is based on a Legislative finding, contained in section 13000, California Water Code, which states in part that it is State policy that "waters of the State shall be regulated to attain the highest water quality which is reasonable". The original discharge of wastes to the groundwater at this site is in violation of this policy.

15. State Board Resolution 88-63
On May 19, 1988, the State Board adopted Resolution 88-63, "Sources of Drinking Water". This resolution states that, with certain exceptions, surface and ground waters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply.

REGIONAL BOARD RESOLUTIONS

16. Regional Board Resolution 89-39
Resolution 88-39, "Incorporation of 'Sources of Drinking Water' Policy into the Water Quality Control Plan" was adopted on March 15, 1989. This policy defines groundwater as suitable or potentially suitable for municipal or domestic supply if it:

    a. has a total dissolved solids content of less than 3,000 mg/l, and

    b. is capable of producing sufficient water to supply a single well with at least 200 gallons per day.

For purposes of establishing cleanup objectives, the water bearing zones at this site qualify as potential sources of drinking water.

BASIN PLAN

17. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 16, 1986 and amendments thereafter. The Basin Plan contains water quality objectives for Los Gatos Creek and South San Francisco Bay and contiguous surface waters and groundwater.

18. The existing and potential beneficial uses of the groundwater underlying and adjacent to the property include:

    a. Industrial process water supply
    b. Industrial service supply
    c. Municipal and domestic supply
    d. Agricultural supply

BASIS FOR WDR RESCISSION

19. The Board establishes the overall cleanup level for a waterbody based upon the most sensitive beneficial use identified. In all cases, the Board first considers high quality or naturally occurring "background" concentration objectives as the cleanup levels for polluted groundwater with a beneficial use of municipal and domestic supply, such as at this site.

20. All possible sources of additional contamination have been removed or mitigated. Groundwater contamination has decreased significantly over the five year monitoring program and are now below detection limits. Groundwater monitoring shows that levels are below MCLs for Benzene and Di (2-ethylhexyl) Phthalate, and below the levels recommended by the EPA National Advisory Water Quality Criteria for drinking water and EPA Region IX's health advisory for other phthalates.

21. Based on the above findings and in consideration of the reasonable protection of beneficial uses and maximum benefit to the people of the State pursuant to State Board Resolution 68-16, additional remediation and groundwater monitoring are not necessary.

22. Water Code Section 13263 requires the Board to review Waste Discharge Requirements periodically and modify them as necessary. Given that relevant water quality objectives are now met at the site, the Waste Discharge Requirements are no longer needed and should be rescinded.

CEQA

23. This action is constitutes a minor modification to land and as such is categorically exempt from the provisions of the CEQA pursuant to Section 15304 of the Resources Agency Guidelines.

NOTICE

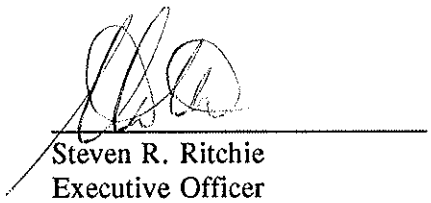
24. The Board has notified the dischargers and interested agencies and persons of its intent to rescind Waste Discharge Requirements for this site and has provided them with the opportunity for a public hearing and opportunity to submit their written views and recommendations.

25. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13263 of the California Water Code, that:

A. Order No. 86-100 is rescinded

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 18, 1995.



Steven R. Ritchie
Executive Officer

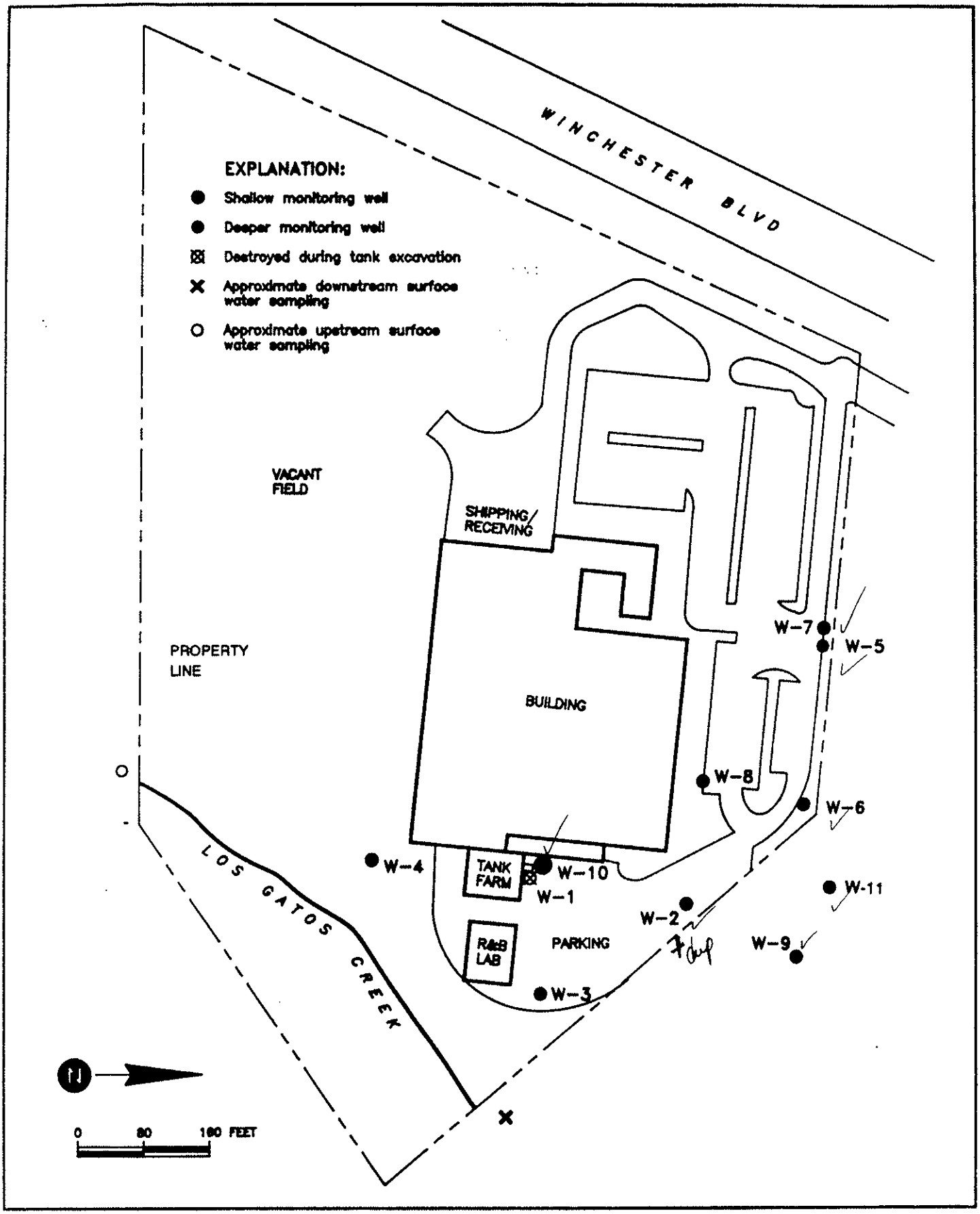

WINCHESTER BLVD
EXPLANATION:
Shallow monitoring well
Deeper monitoring well
Destroyed during tank excavation
Approximate downstream surface water sampling
Approximate upstream surface water sampling
VACANT FIELD
SHIPPING/ RECEIVING
PROPERTY LINE
BUILDING
W-7
W-5
W-8
W-6
W-4
TANK FARM
W-10
W-1
W-11
W-2
R&D LAB
PARKING
W-9
W-3
LOS GATOS CREEK
0
80
160 FEET

Figure 1